1. (Amended) A porous composite product with a homogeneous structure, the product being provided in the form of a film, exhibiting a "BET" specific surface greater than 10 m^2/g and being formed of a polymeric material and at least 20% by weight of at least one filler, the said product being obtained by extrusion and having an open porous structure, wherein the at least one filler exhibits a specific surface greater than 1000 m^2/g and the mean diameter of a plurality of pores is less than 0.5 μm.

4. (Amended) The composite product according to claim 1, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of polyolefins, acrylic polymers, aromatic polymers, polyamides, polyimides, vinyl polymers with a high proportion of ethyl monomers.

5. (Amended) The composite product according to claim 4, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of polyethylenes, polypropylenes, ethylene-α-olefin copolymers.

6. (Amended) The composite product according to claim 4, wherein the thermoplastic elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process are chosen from polyethers, poly(vinyl alcohol)s or ethylene-vinyl alcohol copolymers.

7. (Amended) The composite product according to claim 6, wherein the composite product is 10 to 40% by weight of the polyolefin material, 5 to 40% by weight of the polyether, and the remainder is the at least one filler.

8. (Amended) The composite product according to claim 1, wherein the filler is chosen from fillers with a high specific surface.

9. (Amended) The composite product according to claim 8, wherein the at least one filler exhibits a specific surface of between 300 and 3000m^2/g.

30. (Amended) A porous composite product with a homogeneous structure, the product being provided in the form of a film, the product being formed of a polymeric material, the product exhibiting a specific surface greater than 10m^2/g and comprising between 30% and 85% by weight of at least one filler and the product being obtained by extrusion and having an open porous structure, wherein the at least one filler exhibits a specific surface greater than 1000m^2/g and the mean diameter of a plurality of pores is less than 0.5 μm.

33. (Amended) The composite product according to claim 30, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of polyolefins, acrylic polymers, aromatic polymers, polyamides, polyimides, vinyl polymers with a high proportion of ethyl monomers.

34. (Amended) The composite product according to claim 33, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of fluorinated polyolefins.

46. (Amended) The composite product according to claim 45, wherein the product exhibits a "BET" specific surface of greater than 20m^2/g.

48. (Amended) The composite product according to claim 30, wherein the product in the form of a film exhibits a tensile strength at break of greater than 4MPa.

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49. (Amended) The composite product according to claim 48, wherein the product exhibits a tensile strength at break of greater than 6MPa.

111. (Amended) The composite product according to claim 4, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of fluorinated polyolefins.

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112. (Amended) The composite product according to claim 1, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of thermoplastic polymers or elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process.

113. (Amended) The composite product according to claim 4, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of thermoplastic polymers or elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process.

114. (Amended) The composite product according to claim 6, wherein the thermoplastic elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process are polyethers with a molecular mass of between 200,000 and 1,000,000.

115. (Amended) The composite product according to claim 8, wherein the at least one filler is chosen from fillers composed of active charcoal, inorganic particles or metallic particles.